



Serial No.: 09/770,848  
Confirmation No.: 8405  
Applicant: PATEL  
Atty. Ref.: 11836.0582.CNUS01

**REMARKS:**

REMARKS REGARDING CLAIMS AMENDMENTS:

The above noted amendments to the claims have been made so that the scope and language of the claims is more precise and clear in defining what the Applicant considers to be the invention. Support for the above amendments to the claims can be found in the original specification as filed.

The claims and amended claims are submitted as being clearly distinct and patentable over the art of record and therefore their entry and allowance by the Examiner is requested.

**IN RESPONSE TO THE OFFICE ACTION:**

**FIRST REJECTION UNDER 35 U.S.C. § 102:**

Claim 23 has been rejected under 35 U.S.C. §102(b) as being anticipated by EP 137538.

For there to be anticipation under 35 U.S.C. § 102, “each and every element” of the claimed invention must be found either expressly or inherently described in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) and references cited therein. See also *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 1571, 230 U.S.P.Q. 81, 84 (Fed. Cir. 1986) (“absence from the reference of any claimed element negates anticipation.”); *In re Schreiber*, 128 F.3d 1473, 1477, 44 U.S.P.Q.2d 1429, 1431 (Fed. Cir. 1997). As pointed out by the court, “[t]he identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). An anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed and that its existence was recognized by persons of ordinary skill in the field of the invention. *ATD Corp. V. Lydall, Inc.*, 159 F.3d 534, 545, 48 U.S.P.Q. 2d 1321, 1328 (Fed. Cir. 1998). See also *In re Spada*, 911 F.2d 705, 708, 15 U.S.P.Q. 2d 1655, 1657 (Fed. Cir. 1990).

EP ‘538 provides a biopolymer emulsion containing a polysaccharide, hydrophobic liquid, water, and an emulsifier. (Page 2, lines 30-33) The disclosure makes no mention of weighing agents. As is clearly taught by the EP ‘538 reference the fluids disclosed therein require the use of a biopolymer.

In contrast, the present invention is directed to an invert emulsion drilling fluid comprising an oleaginous fluid, a non-oleaginous fluid, a weighting agent, and an amine surfactant. (See Claim 1) One of skill in the art will appreciate that the biopolymer emulsions disclosed in EP ‘538 would likely not be effective in drilling because they do not contain weighting or bridging agents. Thus, because each and every element (weighting material) has not been disclosed by EP’538, it does not anticipate the present invention.

In view of the above, Applicant requests the withdrawal of the rejection of claim 23 and ask that the Examiner indicate the allowance of the application in the next paper from the Office.

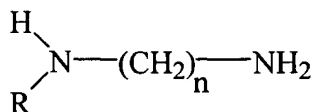
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SECOND REJECTION UNDER 35 U.S.C. § 102:

Claims 1-18, 23 and 24 have been rejected under 35 U.S.C. §102(b) as being anticipated by US Patent 5,254,531 issued to Mueller (the Mueller reference).

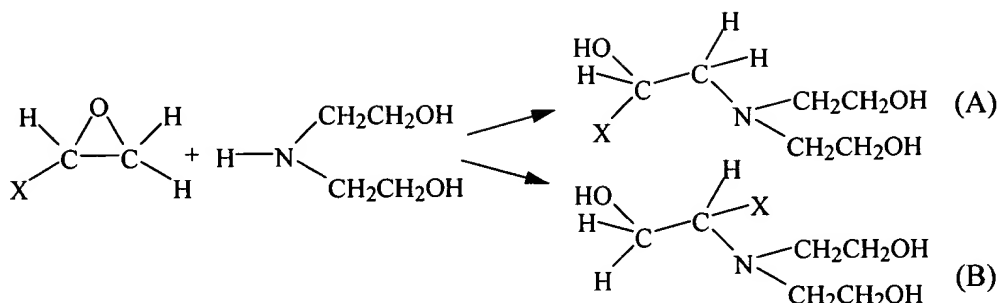
For there to be anticipation under 35 U.S.C. § 102, "each and every element" of the claimed invention must be found either expressly or inherently described in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) and references cited therein. See also *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 1571, 230 U.S.P.Q. 81, 84 (Fed. Cir. 1986) ("absence from the reference of any claimed element negates anticipation."); *In re Schreiber*, 128 F.3d 1473, 1477, 44 U.S.P.Q.2d 1429, 1431 (Fed. Cir. 1997). As pointed out by the court, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). An anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed and that its existence was recognized by persons of ordinary skill in the field of the invention. *ATD Corp. V. Lydall, Inc.*, 159 F.3d 534, 545, 48 U.S.P.Q. 2d 1321, 1328 (Fed. Cir. 1998). See also *In re Spada*, 911 F.2d 705, 708, 15 U.S.P.Q. 2d 1655, 1657 (Fed. Cir. 1990).

The Mueller reference, in Col. 6 teaches the use of compounds having the formula

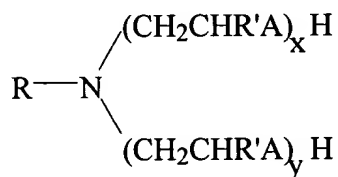


In which R is a 8 to 22 C hydrocarbon and *n* has a value up to about 6, preferably from 2-4.(Col. 6, lines 12-18)

Further in the working examples of the Mueller reference teaches an invert drilling mud including a basic amine that is the reaction product of an epoxidized C<sub>12-14</sub> α - olefin and diethanolamine. The reaction in examples 2-4 is as follows:



In contrast, the present invention is directed to an invert emulsion drilling fluid comprising an amine surfactant with the following structure



wherein R is a C<sub>12</sub>-C<sub>22</sub> aliphatic hydrocarbon; R' is an independently selectable from hydrogen or C<sub>1</sub> to C<sub>3</sub> alkyl; A is NH or O, and 1 < x+y ≤ 3. Thus the sum of x + y must be greater than 1.

The compounds of the instant invention are not anticipated by those disclosed in Mueller because each and every element is not present. As indicated above, the value for x+y must be greater than 1, thus this excludes the compounds disclosed in the Mueller reference. Further the Mueller invention specifies a compound that contains a hydroxyl group on the terminal or penultimate carbon of the olefin chain. The "R" portion of the amine compound of the instant invention is an aliphatic hydrocarbon, i.e. only contains carbon and hydrocarbon.

In view of the above, Applicant requests the withdrawal of the rejection of Claims 1-18, 23 and 24 and ask that the Examiner indicate the allowance of the application in the next paper from the Office.

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THIRD REJECTION UNDER 35 U.S.C. § 102:

Claims 1-8, 11-13, 17, 18, 23 and 24 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by US Patent 3,125,517 of Voda ( the Voda reference).

In the interest of brevity, please refer to the first section for establishing the elements of anticipation.

The Voda reference teaches an invert emulsion with at least 70% aqueous phase and less than 30% oil phase, a two component emulsifying agent is required and the pH is 5-8. (see Claim 1). The two component emulsifier is disclosed in Column 3, lines 63-64. If the pH is greater than or less than this range, the emulsion breaks. (Column 7, lines 59-63). The Voda reference fluids also have high viscosity. (Column 1, lines 71-72). All of the examples have a viscosity greater than 300 cps at 600 rpm. (See examples). One of the goals of the Voda reference is to eliminate the need for weighting materials. (Column 1, lines 36-44).

In contrast, the present invention the present invention is directed to an invert emulsion drilling fluid comprising an oleaginous fluid, a non-oleaginous fluid, a weighting agent, and an amine surfactant. (See Amended Claims 1 and 12)

The fluids of Voda have exactly the opposite composition as those of the present invention, they have a higher viscosity, and do not contain weighting agents. One of skill in the art will appreciate that fluids with a high viscosity cannot be effectively loaded up with weighting or bridging agents and still be useful as drilling fluids. Thus, Voda does not anticipate the compounds of the present invention because each and every element (weighting material) has not been disclosed.

In view of the above, Applicant requests the withdrawal of the rejection of Claims 1-8, 11-13, 17, 18, 23 and 24 and ask that the Examiner indicate the allowance of the application in the next paper from the Office.

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FOURTH REJECTION UNDER 35 U.S.C. § 102:

Claim 23 has been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by US Patent 4,670,550 issued to Bleeker ( the Bleeker reference).

In the present paper claim 23 has been canceled, thus the basis for this rejection has been removed.

In view of the above, Applicant requests the Examiner to indicate the allowance of the application in the next paper from the Office.

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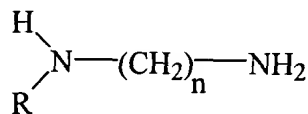
FIRST REJECTION UNDER 35 U.S.C. § 103:

Claims 1-18 and 23-24 have been rejected under 35 U.S.C. §103(a) as being unpatentable given US Patent 5,254,531 issued to Mueller (the Mueller reference)..

Applicants request that the Examiner reconsider and withdraw the above rejection of the claims in view of the following:

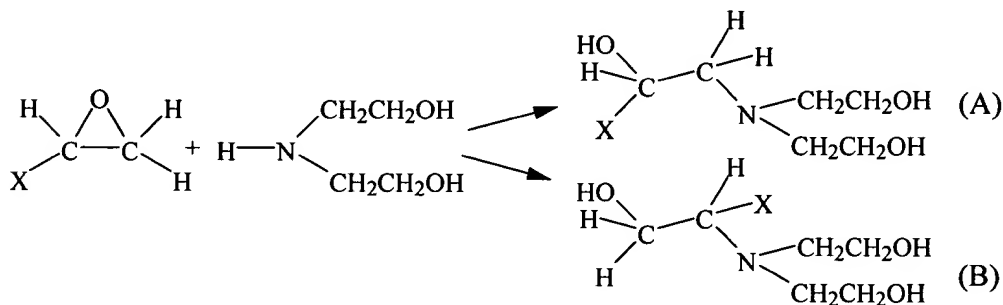
To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q 494, 496 (CCPA 1970). Furthermore, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). The examiner has the burden of establishing a *prima facie* case of obviousness. *In re Deuel*, 51 F.3d 1552, 1557, 34 U.S.P.Q. 2d 1210, 1214 (Fed. Cir. 1995). The burden to rebut a rejection of obviousness does not arise until a *prima facie* case has been established. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q 2d 1955, 1957 (Fed. Cir. 1993). Only if the burden of establishing a *prima facie* case is met does the burden of coming forward with rebuttal argument or evidence shift to the applicants. *In re Deuel*, 51 F.3d 1552, 1553, 34 U.S.P.Q 2d 1210, 1214 (Fed. Cir. 1995), see also *Ex parte Obukowicz*, 27 USPQ 2d 1063, 1065 (B.P.A.I. 1992).

Claims 2-11 all depend from independent claim 1 and claims 13-18 all depend from independent claim 12. As previously stated, the Mueller reference does not teach or suggest the structure of the compound used in the claimed invention. Specifically, the Mueller reference, in Col. 6 teaches the use of compounds having the formula

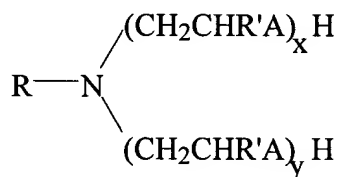


In which R is a 8 to 22 C hydrocarbon and  $n$  has a value up to about 6, preferably from 2-4. (Col. 6, lines 12-18)

Further in the working examples of the Mueller reference teaches an invert drilling mud including a basic amine that is the reaction product of an epoxidized  $C_{12-14}$   $\alpha$  - olefin and diethanolamine. The reaction in examples 2-4 is as follows:



In contrast, the present invention is directed to an invert emulsion drilling fluid comprising an amine surfactant with the following structure



wherein R is a  $C_{12}$ - $C_{22}$  aliphatic hydrocarbon; R' is an independently selectable from hydrogen or  $C_1$  to  $C_3$  alkyl; A is NH or O, and  $1 < x+y \leq 3$ . Thus the sum of  $x + y$  must be greater than 1.

Applicant submits that the above arguments made with respect to the Mueller reference, and incorporated herein by reference, obviate any *prima facie* basis for the above rejection even when taken in combination with the art of record because they do not contain the claimed



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features of Applicant's invention, individually or in combination. Thus, they cannot render Applicant's claims unpatentable for obviousness. See MPEP 2143.

Given the above, Applicant requests that the rejection of claims 1-18 under 35 U.S.C. §103(a) be reconsidered and withdrawn and that the Examiner indicate the allowance of the claims in the next paper from the Office.

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NONSTATUTORY DOUBLE PATENTING REJECTION:

Claims 23-24 have been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 6,218,342 to Patel et al. In the present paper claims 23 and 24 have been canceled, thus the basis for this rejection have been removed.

In view of the above, Applicant requests the Examiner to indicate the allowance of the application in the next paper from the Office.

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The undersigned representative requests any extension of time that may be deemed necessary to further the prosecution of this application.

The undersigned representative authorizes the Commissioner to charge any additional fees under 37 C.F.R. 1.16 or 1.17 that may be required, or credit any overpayment, to Deposit Account No. 01-2508, referencing Order No. 11836.0582.CNUS01.

In order to facilitate the resolution of any issues or questions presented by this paper, the Examiner should directly contact the undersigned by phone to further the discussion.

Respectfully submitted,

Carter J. White

Patent Attorney

Reg. No. 41374

Tel. 713 268 1372

Date: 6 Aug 03